

What is claimed is:

1. ~~A system for reading and writing indicia on a medium comprising:~~

~~a light source for producing a light beam;~~

~~reading means for directing said light beam at said medium so as to scan indicia disposed on a first portion of said medium, detecting at least a portion of the light of variable intensity reflected off the indicia, and generating an electrical signal indicative of the detected light intensity; and~~

~~writing means for directing said light beam at said medium in a pattern on a second portion of said medium so as record information on said medium.~~

2. A system as defined in claim 1, wherein said light source is a single laser diode.

3. A system as defined in claim 1, wherein said writing means includes means for pulsing said light source as said light beam is scanned in a pattern on said second portion of said medium.

4. A system as defined in claim 1, further comprising switching means for switching between said reading means and said writing means.
5. A system as defined in claim 1, wherein said medium has a light and/or heat sensitive surface coating on said second portion of said medium so as to form indicia when said light beam is directed thereto.
6. A system as defined in claim 1, further comprises means for processing said electrical signal to detect an indicia pattern representing a control indicia so as to change said system from a reading mode to a writing mode.
7. A system as defined in claim 1, wherein said switching means functions to switch said system from writing mode to reading mode upon completion of a written operation so as to read the indicia which have been writing and to verify their accuracy.
8. A system as defined in claim 1, further comprising means for modifying the light beam in response to changing from reading mode to writing mode or vice versa.

9. A system as defined in claim 1, further comprising means for moving the medium in a path generally normal to the optical path of said light beam so as to effect scanning of said medium by said light beam as said medium is moved.
10. Apparatus for reading and writing indicia having portions of different light reflectivity such as bar code symbols or the like, comprising:
- (a) a light source for emitting a light beam;
 - (b) an optical component disposed in the path of said beam for directing the light beam along an optical path toward a target located in the vicinity of a reference plane lying generally normal to the optical path so as to scan spatially adjacent portions of said reference plane;
 - (c) control means for operating said light source in a writing mode so as to direct light to portions of said target where indicia is to be written; and
 - (d) sensor means having a field of view and operative in a reading mode for detecting a portion of light of variable intensity reflected off the target, and generating an electrical signal indicative of the detected light intensity.

11. A method for reading and writing indicia on a medium comprising:

producing a light beam;

directing said light beam at said medium so as to illuminate a first portion of said medium, detecting at least a portion of the light of variable intensity reflected off the indicia, and generating an electrical signal indicative of the detected light intensity; and

directing said light beam at said medium in a pattern on a second portion of said medium so as record information on said medium.

12. A method as defined in claim 11, wherein said step of producing a light beam uses a single laser diode.

13. A method as defined in claim 11, further comprising the step of pulsing said light source as said light beam is scanned in a pattern on said second portion of said medium.

14. A method as defined in claim 11, further comprising the step of switching between said reading and writing on said medium.

15. A method as defined in claim 1, wherein said medium has a light and/or heat sensitive surface coating on said second portion of said medium so as to form indicia when said light beam is directed thereto.
16. A method as defined in claim 11, further comprising the step of processing said electrical signal to detect an indicia pattern representing a control indicia so as to change said system from a reading mode to a writing mode.
17. A method as defined in claim 11, further comprising said step of switching said system from writing mode to reading mode upon completion of a written operation so as to read the indicia which have been written and to verify their accuracy.
18. A method as defined in claim 11, further comprising the step of modifying the light beam in response to changing from reading mode to writing mode or vice versa.
19. A method as defined in claim 11, further comprising the step of moving the medium in a path generally normal to the optical path of said light beam so as to effect scanning of said medium by said light beam as said medium is moved.